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LT Brian T. Ivey, MSC, USNR

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In these changing times of the Military Health System, Medical Treatment Facilities are faced with numerous resource constraints. At the same time, they must justify their existence. Enrollment to TRICARE Prime with a Military Treatment Facility Primary Care Manager is one inidcator that is tracked as justification. Naval Hospital Corpus Christi Healthcare System is looking for a framework to guide them in making strategic planning decisions on marketing efforts to increase TRICARE Prime enrollment to the Military Treatment Facility. This paper is documentation of a thorough needs assessment of the beneficiary population to ascertain the eligible population already enrolled and those remaining. It also suggest what the prime target market is for marketing and capturing into TRICARE Prime.

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A Community Needs Assessment to Plan Marketing Strategies for Increased TRICARE Prime Enrollment to the Naval Hospital Corpus Christi Healthcare System

LT Brian T. Ivey

U. S. Army-Baylor University Graduate Program in Healthcare Administration

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I would also like to thank Ms. J. Bowman from SAIC and Mr. G. Schmidt from Naval Hospital Corpus Christi for their assistance in gathering data to conduct the needs assessment. Without their assistance, the completion of the project would have been much more difficult and time consuming. This has been a wonderful learning experience and I give my personal thanks to everyone who assisted me throughout the process.

Abstract

In these changing times of the Military Health System, Medical Treatment Facilities are faced with numerous resource constraints. At the same time, they must justify their existence. Enrollment to TRICARE Prime with a Military Treatment Facility Primary Care Manager is one indicator that is tracked as justification. Naval Hospital Corpus Christi Healthcare System is looking for a framework to guide them in making strategic planning decisions on marketing efforts to increase TRICARE Prime enrollment to the Military Treatment Facility.

Naval Hospital Corpus Christi Healthcare System has a market penetration of 82%. This leaves a relatively small population not enrolled, 4,798. Of the enrolled population, 3,458 are enrolled to TRICARE Prime with a Network Primary Care Manager. In the summer of 2000, there are plans to begin directed enrollment. This will direct Prime beneficiaries into the Military Treatment Facility for care. Capacity models demonstrate that the system has the space to recapture a large portion of the non-enrolled.

Even though there is a marketable population for recapture, it is not large enough to justify spending a great deal of resources. These valuable resources should be directed at marketing new and existing programs to beneficiaries already using the system.

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A Community Needs Assessment to Plan Marketing Strategies for the Naval Hospital Corpus Christi Healthcare System

A major responsibility of any healthcare system is to ensure the health of the community it serves. The Naval Hospital Corpus Christi Healthcare System (NHCCHS) accepts this responsibility, but directed at a very specific community, Department of Defense (DoD) personnel and its beneficiaries in South Texas. TRICARE serves as the DoD's managed care arm and has community health and wellness as one of its top priorities. Because TRICARE is a DoD wide program, it relies heavily on the military treatment facility (MTF) commanders to assess the needs of its specific population, close gaps where necessary, and market to promote the program.

Resources are precious commodities in any healthcare system. Like any other healthcare system, the NHCCHS continuously contemplates the best use of its valuable resources. Questions such as "Should another pediatrician be placed at the Ingleside Clinic?" or "Should we bring more TRICARE Prime enrollees to the MTF or clinic" frequently arise. There must be a framework in place to facilitate sound business decisions in response to these types of questions.

The TRICARE marketing plan advertises TRICARE Prime as the best program for delivering healthcare to DoD beneficiaries.

Although TRICARE Prime with a MTF primary care manager (PCM) is the optimum choice for MTFs, few have enrolled to capacity. Several factors contribute to this situation: space-available care still remains a viable option, commanders may restrict enrollment of certain population segments to provide ample opportunity for active duty family member enrollment, some eligible beneficiaries do not know their healthcare choices, and MTF commanders allow Prime enrollees to choose a network PCM prior to reaching capacity of all MTF PCMs (DOD (TMA) TRICARE Marketing Office, 1998). The NHCCHS currently experiences many of these problems. They are attributable to command policies, downsizing efforts, and the unique population characteristics of each location.

The Military Health System (MHS) is in a time of vast change. As the worlds largest Health Maintenance Organization (HMO), the challenges for success are great. Currently, and into the future, every MTF must prove its worth to the MHS and the community served. If not, an MTF's existence in the MHS is limited.

The NHCCHS is attempting to strategically forge its way into the future as the pinnacle for military health. To be the pinnacle of military medicine, NHCCHS must be on the forefront of healthcare business decisions, wellness programs, and

community support. It is to this extent that a well documented needs assessment is necessary. To reach the vision,

> "We will be the pinnacle of patient-centered military healthcare systems, characterized by:
>
> - Innovative military medical readiness and wellness initiatives, and
> - A seamless network with our uniformed and civilian partners that is our beneficiaries' first choice for healthcare,"

a thorough understanding of the community and beneficiaries served is crucial. A community needs assessment meets this demand.

BACKGROUND

The NHCCHS is a dynamic primary care network system that provides healthcare to DoD beneficiaries at four distinct military bases. The treatment facilities are located at Naval Air Station Corpus Christi, Naval Air Station Kingsville, Naval Station Ingleside, and Joint Reserve Base Fort Worth. Each location presents a unique challenge to the healthcare system because of varying missions, locations, and populations within the respective catchment areas.

Naval Hospital Corpus Christi. Naval Hospital Corpus Christi (NHCC) is located on Naval Air Station Corpus Christi (NAS Corpus). NAS Corpus is in the Flour Bluff area ten miles

southeast of the city proper, Corpus Christi. As the headquarters for NHCCHS, it oversees the operations at the BMC Ingleside, which is twenty-five miles north across Corpus Christi Bay; BMC Kingsville, which is fifty miles south by road; and BMC FT Worth, which is over four hundred miles north. At NHCC, healthcare needs are provided for the permanent parties of the NAS Corpus Christi, students in basic officer flight training, the Coast Guard Command, the eligible beneficiaries of the Army Depot, as well as, active duty family members and eligible retirees and their family members in the catchment area. It is situated in a metropolitan area with three major hospital systems: Driscoll Foundation Children's Hospital, Christus Spohn Health System with three locations locally, and Columbia HCA with four locations locally. Additionally, the metropolitan area is inundated with family practice physicians, pediatricians, and a wide variety of other specialists. The only noticeable need for specialty care in the local area is Dermatology. The abundance of providers places NHCC in direct competition with non-military healthcare systems for TRICARE Prime enrollment.

NHCC began divesting itself of numerous underutilized services (i.e., operating room, emergency room, inpatient services, etc.) in 1997. In the downsizing effort, many military specialty provider positions were lost. Therefore, NHCC has

relied on the managed care network, contracts, and resource sharing agreements with providers, provider groups, and Spohn Christus System to provide services that are not currently available in-house. Although the same availability to care exists, just in a different package, the perception of downsizing healthcare capabilities introduced skepticism to many beneficiaries concerning the availability of services. A large part of the population felt NHCC would be permanently closing their doors or relying too extensively on the TRICARE network to provide the majority of required care. This circumstance, coupled with NHCCHS's policy of allowing TRICARE Prime beneficiaries the choice of a MTF or network PCM, paved the way for many TRICARE Prime enrollees to utilize network PCMs as a Prime or Extra beneficiary.

Also, two contract pediatricians recently left NHCC and established individual practices in the Corpus Christi area. As these individuals made the transfer to non-military practices, many of their patients followed. As a result, a large part of the pediatric population now uses a non-MTF pediatrician for healthcare services.

Naval Air Station Kingsville. The BMC Kingsville is located on NAS Kingsville. It is 50 miles, gate-to-gate driving distance, from NAS Corpus Christi. The clinic provides healthcare for permanent party staff and jet flight officer

training students. Since the jet flight school lasts only nine months, this is a very transient population. The clinic is staffed to provide a limited amount of care and relies heavily on NHCC, which is over an hour away, and the network to fill the gaps. For example, the clinic does not have an emergency room so all emergency care must go to Spohn Kleberg. This is the closest service being only two miles outside the front gate. Because Kingsville is a remote community, the network has limited resources to fill the gaps. This population does not have many choices for healthcare. Due to the transient nature of the student population, the fact they are required to live in the Bachelor Officer Quarters during training, and the limited amount of services available in Kingsville, many families do not accompany the students for this phase of their training.

There is a large military retiree population living in the Rio Grande Valley. This population is very dedicated to the military and many come north to utilize several of the installation services such as healthcare and pharmacy refills. Because BMC Kingsville is the last military treatment facility this far south in Texas, it and NHCC receive a large number of non-prime, retiree and retiree family member beneficiaries requesting healthcare services.

Naval Station Ingleside. BMC Ingleside is twenty-five miles, driving distance, north of NAS Corpus Christi. It is

located in the Coastal Bend area and is ideally situated along the Corpus Christi ship channel, which links it to the Gulf of Mexico. The Naval Station Ingleside was converted to homeport the Mine Sweeper countermeasures community in 1992 and is rapidly growing. Today, it is homeport to twenty-two ships. Much like Kingsville, this clinic has limited resources and relies heavily on NHCC and the network providers to fill gaps in healthcare needs. Because the population growth of active duty and their dependents has increased since the base conversion, there are greater demands placed on the clinic appointment system. This has led many enrollees to seek care in the civilian network to answer access issues. However, the area surrounding Ingleside is a remote area with limited medical resources.

There has historically been housing issues associated with Naval Station Ingleside. This situation forced many military personnel and their family members to seek residence closer to Corpus Christi. It has only been recently that new apartment complexes were constructed in the Ingleside area. This has given personnel the opportunity to reside closer to Naval Station Ingleside.

Joint Reserve Base FT Worth. The Joint Reserve Base in FT Worth is located in the major metropolitan area of Dallas/FT Worth. This clinic is staffed to serve only the active duty personnel and drilling reservists. The real population issue

currently facing the clinic relates to pharmacy demands. Because this is a Base Realignment and Closure (BRAC) area, the pharmacy serves all beneficiaries within the BRAC area. This places a significant strain on the pharmacy and causes the NHCCHS to look for alternatives in providing this service (e.g., automation, internal resource allocation, etc.).

Each of the four sites is fundamentally different than the other. The missions are different, the military personnel are from different professions, and the surrounding areas present with varying levels of support. Therefore, it is imperative to treat the four sites as separate markets and establish target markets within each. This will assist NHCCHS in deciding which customers to attract to available services. To add more confusion to the community, there is a large influx of retirees traveling from the northern United States to south Texas for the winter months. While they are in the area, these "snowbirds" utilize the NHCCHS for the majority of their care. This seasonal movement must be considered when analyzing services and resources.

LITERATURE REVIEW

The implementation of TRICARE has created a competitive environment for DoD beneficiaries. They have the choice of enrollment in TRICARE Prime, Standard, or Extra. Many sites allow TRICARE Prime enrollees the choice of choosing a MTF PCM or a network PCM. Currently, this does not directly impact the annual budget assigned to each command. However, since the managed care contractors are now paying supplemental and CHAMPUS bills, these dollars will be removed from the annual planning figure (APF) before reaching the MTF. Also, there is the possibility of decreased funding with the implementation of enrollment-based capitation in TRICARE 3.0 where the budgets are based on enrollment to TRICARE Prime MTF. The MHS believes it is more cost effective for healthcare needs to be delivered in medical treatment facilities than in the civilian community. All efforts should be focused on bringing this care into the MTF when it makes good, sound business sense.

Every MTF is required to have a marketing plan (DOD (TMA) TRICARE Marketing Office, 1998) to assist the TRICARE program in attracting beneficiaries to the MTF or clinic. The marketing effort should build exchange relationships that move the organization toward fulfilling its mission and vision. There are five major functions to marketing that must be considered: identifying markets, promoting the organization, managing

external relationships, convincing patients to select the organization, and attracting capable workers (Griffith, 1995).

The first function, identifying markets, is extremely critical. Because the markets are so different, mass marketing will not be effective. Large differences within the broad consumer market have a negative affect on demand (Berkowitz, 1996). Organizations deal with this complexity by segmentation.

Market segmentation "is the process of grouping into clusters consumers who have similar wants or needs to which an organization can respond by tailoring one or more elements of the marketing mix" (Berkowitz, 1996, p. 168). There are numerous methods to segment a market. It can be segmented based on socio-demographics, geographic, psychographic, or historic demand criteria (Berkowitz, 1996). Additionally, a market may need to be segmented multiple times to identify target markets for particular services.

Each location presents with varying situations surrounding healthcare issues. Since population data is only meaningful if linked to a geographic unit (Pol and Thomas, 1992) and to keep the data from becoming convoluted, it is necessary to divide the mass-market into four segmented markets based on a geographic taxonomy. The segmented markets are Naval Air Station Corpus Christi, Naval Air Station Kingsville, Naval Station Ingleside, and Joint Reserve Base FT Worth. The geographic unit can then be

segmented again to reach a specific market, i.e., the target market. Identifying the geographic unit is prerequisite to performing needs assessments. This is one of the most neglected requirements when conducting the assessment resulting in inadequate information (Soriano, 1995).

Within each geographical unit, a concentration strategy is utilized to target a specific segment, the target market. "Target marketing is a focused, planned approach for identifying and winning the customers whose needs you can best satisfy" (Cook, 1993, p. 3). By target marketing, an organization can leverage its resources to best satisfy existing customers and win new ones to the system.

A needs assessment is utilized to collect data on the need or current use of services (Soriano, 1995). It allows an organization to properly align the services offered with the needs of the customers. "Needs assessments may be defined broadly as 'a systematic set of procedures undertaken for the purpose of setting priorities and making decisions about programs or organizational improvement and allocation of resources. The priorities are based on identification of needs'" (Witkin and Altschuld, 1995, p. 4).

The above definition often brings to light numerous organizational difficulties such as a shortage of time, personnel, and finances. The definition suggests there should be

a direct alignment between the needs of the population and the services rendered. However, this is not always feasible. No healthcare organization can safely satisfy every customer need. There must be a balance between competing perspectives and objectives. In other words, a balance must be achieved between what should be done in terms of need, what can be done at a practical level, and what is affordable (Robinson and Elkan, 1996).

Within a needs assessment, a great deal of insight can be obtained by merging compositional characteristics with healthcare indicators. Population composition characteristics are those characteristics that make up the demographics or characteristics of people in a geographic area (Pol, 1992). The compositional make up can be compared between the four target markets to ascertain similarities and differences. This allows the NHCCHS to make sound judgments about resource allocation and marketing efforts.

The needs assessment will identify gaps between customer needs and services rendered through a thorough community profile. It provides a starting point, helps evaluate progress and measure distance from the ultimate goal. Alternately, if the goal is reached, it will suggest other routes. Bosworth suggests the way the following six "yes," "no," or "not sure' questions

are answered will indicate whether a needs assessment should be undertaken.

1. Has your hospital lost the trust of your community?
2. Do the people and organization that pay your bills require, or will they soon require, your hospital to meet certain population-based quality and performance standards?
3. Is capitation in or nearing your community?
4. Is your hospital required by a federal or state government or state agency to conduct a community health assessment?
5. Do you think you might face a potential public relations nightmare without doing one?
6. Do you think that looking upstream to find ways to improve the health of your community is the right thing to do? (Bosworth, 1999).

If the answer to any of these questions is "yes," then a needs assessment should be conducted. As previously discussed, the NHCCHS can answer "yes" to most of these questions.

Bosworth looks at an assessment as the first piece of the puzzle. It allows for charting a course along the road fueled with sound strategies. He believes a sound assessment should contain five elements: an assessment plan, a community profile, a determination of the key health needs of the community,

estimates of the health status of the community, and recommendations for action (Bosworth, 1999).

Once the needs assessment is complete and marketing strategies result in increased beneficiaries in MTF Prime, what impact will this have on the MTF or clinic? Can the clinical make up of each site support the influx of beneficiaries? Volume trade-off factors (VTFs) can help answer these questions. VTFs are designed to specifically measure the expected change in healthcare service utilization as a customer moves from one system to another (Center for Naval Analysis, 1999).

This study will evaluate the geographic units for Naval Air Station Corpus Christi, Naval Air Station Kingsville, and Naval Base Ingleside in relation to TRICARE Prime enrollment with a MTF PCM. The Joint Reserve Base FT Worth is excluded since they only see active duty personnel and drilling reservists who are automatically "enrolled" in TRICARE Prime. The study will provide a framework for the NHCCHS to strategically plan for marketing and make sound business decisions on resource allocation. An extensive health needs assessment would take a tremendous amount of time, people, and financial resources. These resource restraints will limit this needs analysis to only providing information on how to increase TRICARE Prime enrollment.

METHOD, PROCEDURES, AND RESULTS

Secondary data was predominantly utilized to conduct the needs assessment. This is data that has been interpreted at least once between observing and documenting the event (Cooper and Schindler, 1998). Because secondary data is used for this study, the validity of the results is dependent on the reliability of the population characteristics derived, and it is dependent on the source systems for the data. Numerous systems were used to collect data for this assessment. Each system can provide different results for the same question. Throughout DoD, there is not a systematic methodology for collecting and reporting healthcare data. Therefore, results between each system may vary, sometimes significantly. When collecting the data, a decision was made on which data set to utilize based on the question asked. The logic for the decision is explained for each case.

The population characteristics are a cross sectional study. Therefore, it cannot take into account several factors: the highly transient population, change of duty stations by active duty personnel, changes in military mission, etc. For this reason, it is assumed that the snapshot is a good representation of the population over the time period studied.

Assessment Plan. Bosworth's model suggests that the needs assessment should begin with an assessment plan. In essence, the

proposal served as the formal plan. It described the methodology used for data collection and analysis and suggested how the information would be ranked and used.

Community Profile. The NHCCHS market is segmented into three geographical units: Naval Air Station Corpus Christi, Naval Air Station Kingsville, and Naval Station Ingleside. The Managed Care Forcasting & Analysis System (MCFAS) was used to segment NHCCHS based on each MTF's Defense Medical Information System Identification (DMISID). MCFAS Version V2.3.2 12.1.1 is used to produce population projections at the zip code level based on rules for assigning population cohorts to a MTF. The Provider Requirements Integrated Specialty Model (PRISM) was the model utilized to create the geographical units. Because NHCCHS is an ambulatory care system, the PRISM model is required by DoD policy. This model is based on zip code centroids within a 20-mile radius of the DMISID. The populations are assigned based on zip codes and beneficiary's service affiliation (CEIS, 1998).

The MCFAS population projection data was compared to the lead agent data that was generated from the Defense Enrollment Eligibility Reporting System (DEERS). Both reports were produced in January 00. The MCFAS report was a population projection for fiscal year 2000 and the lead agent report was a current status. The MCFAS data was 7.2% lower for total eligible population than the lead agent data. MCFAS data was chosen for the analysis,

because the lead agent voiced a concern that there is a discrepancy in their system of approximately 40,000 records for Region 6 and they use a different community profile. They are aware of the discrepancy issues and are working to correct them.

This study is only concentrating on non-active duty beneficiaries since active duty beneficiaries are automatically considered TRICARE Prime and are assigned a MTF PCM upon registration. Table 1 is the total population of beneficiaries fitting the PRISM model for NHCC, BMC Kingsville, and BMC Ingleside. This data was collected using MCFAS.

Table 1

Profile of the Total Beneficiary Population for NHCCHS

NHCCHS Total Pop'n				
Age Group	Female	Male	Total	% of Total
0-4	1118.0	1095.0	2213.0	8.00%
5-14	1970.5	1990.0	3960.5	14.31%
15-17	486.0	550.5	1036.5	3.75%
18-24	1411.0	2177.5	3588.5	12.97%
25-34	2023.0	2874.5	4897.5	17.70%
35-44	1597.5	1910.0	3507.5	12.68%
45-64	2576.5	2632.0	5208.5	18.83%
65+	1531.0	1724.0	3255.0	11.76%
Total	12713.5	14953.5	27667.0	100.00%

The male and female population is almost equal (54% and 46% respectively). The pediatric population (ages 0-17) makes up 26% of the total population. The total Medicare population eligible

for care at a MTF is 12%. Recall that these figures do not include the population that resides outside the 20-mile radius of a MTF. Therefore, a large population of retirees and Medicare eligible retirees living in the Rio Grande Valley are not captured in this profile.

Table 2 and Figure 1 profile the population of active duty family members for NHCC. Table 3 and Figure 2 profile the population of retirees and their family members for NHCC. This data was collected using MCFAS.

Table 2

NHCC Active Duty Family Member Population Profile

NHCC AD Family Member Population						
			%		% Population	
Age Group	Female	Male	Female	Male	Female	Male
0-4	569.5	537.0	11.4	10.7	3.3	3.1
5-14	804.5	766.0	16.1	15.3	4.7	4.5
15-17	109.0	103.0	2.2	2.1	0.6	0.6
18-24	450.5	81.5	9.0	1.6	2.6	0.5
25-34	965.0	46.5	19.3	0.9	5.7	0.3
35-44	428.0	19.0	8.5	0.4	2.5	0.1
45-64	113.5	12.5	2.3	0.2	0.7	0.1
65+	3.5	1.5	0.1	0.0	0.0	0.0
Total	3443.5	1567.0	68.7	31.3	20.2	9.2
Total Population	**5010.5**				**29.4**	

Figure 1. Population pyramid for the Active Duty Family Member population at NHCC.

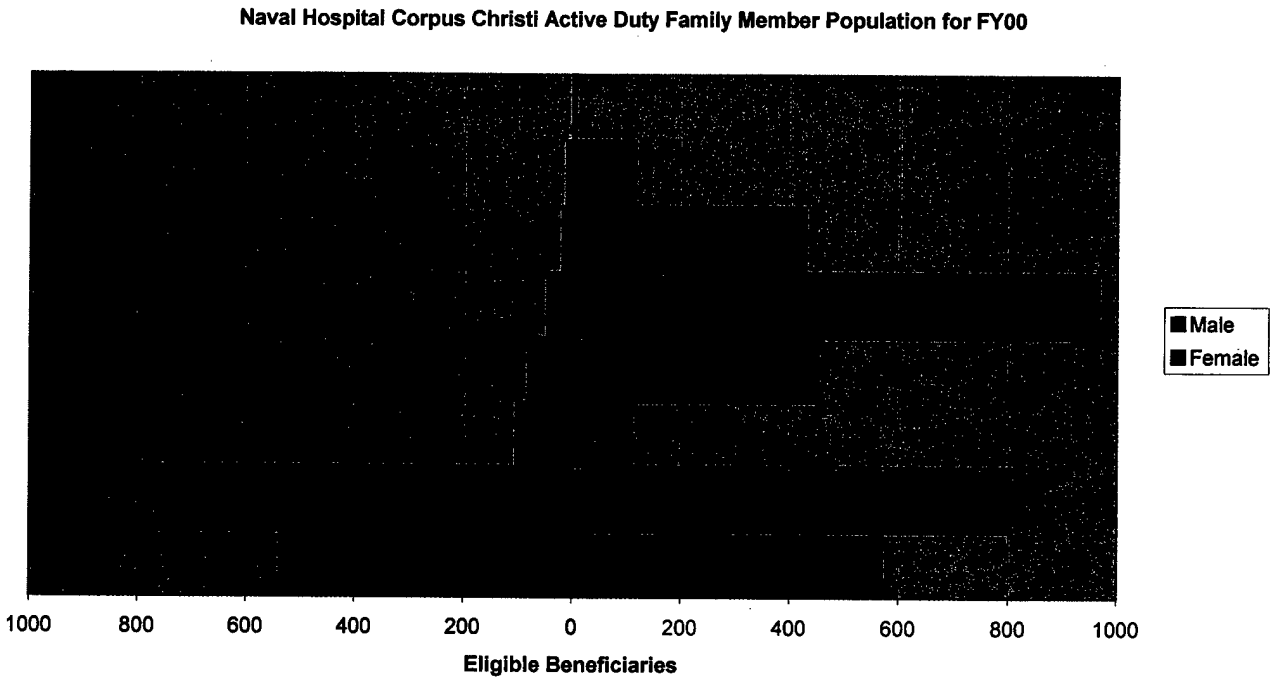
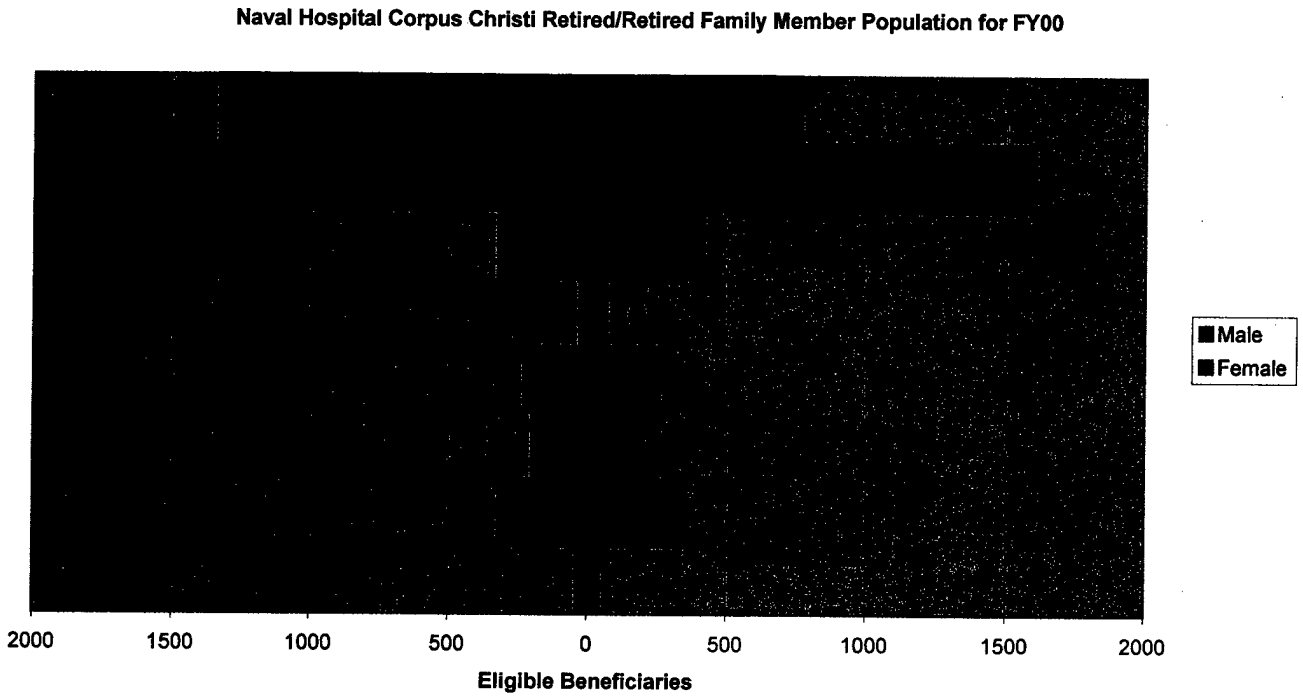


Table 3

NHCC Retiree and Retiree Family Member Population Profile

NHCC Ret/Ret FM Population						
			%		% Population	
Age Group	Female	Male	Female	Male	Female	Male
0-4	42.0	39.0	0.5	0.5	0.2	0.2
5-14	321.5	320.0	4.1	4.0	1.9	1.9
15-17	200.0	200.5	2.5	2.5	1.2	1.2
18-24	256.0	230.5	3.2	2.9	1.5	1.4
25-34	65.5	31.5	0.8	0.4	0.4	0.2
35-44	414.0	325.5	5.2	4.1	2.4	1.9
45-64	1602.5	1757.0	20.3	22.2	9.4	10.3
65+	763.0	1334.0	9.7	16.9	4.5	7.8
Total	3664.5	4238.0	46.4	53.6	21.5	24.8
Total Population	**7902.5**				**46.3**	

Figure 2. Population pyramid for the Retiree and Retiree Family Member population at NHCC.



Active Duty Family Members (ADFM) and Retirees and their family members constitute 76% of NHCC beneficiary population. The ADFM pediatric population (ages 0-17) is 17% of NHCC beneficiary population. The female population of the ADFM and the Retirees and Retiree Family Member groups comprise the largest percentage of the population at 42% of NHCC beneficiary population.

Table 4 and Figure 3 profile the population of active duty family members for BMC Kingsville. Table 5 and Figure 4 profile

the population of retirees and their family members for BMC Kingsville. This data was gathered using MCFAS.

Table 4

BMC Kingsville Active Duty Family Member Population Profile

Kingsville AD Family Member Population						
			%		% Population	
Age Group	Female	Male	Female	Male	Female	Male
0-4	114.5	121.5	13.8	14.6	3.8	4.0
5-14	99.0	107.0	11.9	12.9	3.3	3.5
15-17	13.0	20.5	1.6	2.5	0.4	0.7
18-24	97.5	11.0	11.7	1.3	3.2	0.4
25-34	185.0	5.0	22.2	0.6	6.1	0.2
35-44	39.5	4.0	4.7	0.5	1.3	0.1
45-64	13.0	1.0	1.6	0.1	0.4	0.0
65+	0.5	0.0	0.1	0.0	0.0	0.0
Total	562.0	270.0	67.5	32.5	18.6	8.9
Total Population	**832.0**				**27.5**	

Figure 3. Population pyramid for the Active Duty Family Member population at BMC Kingsville.

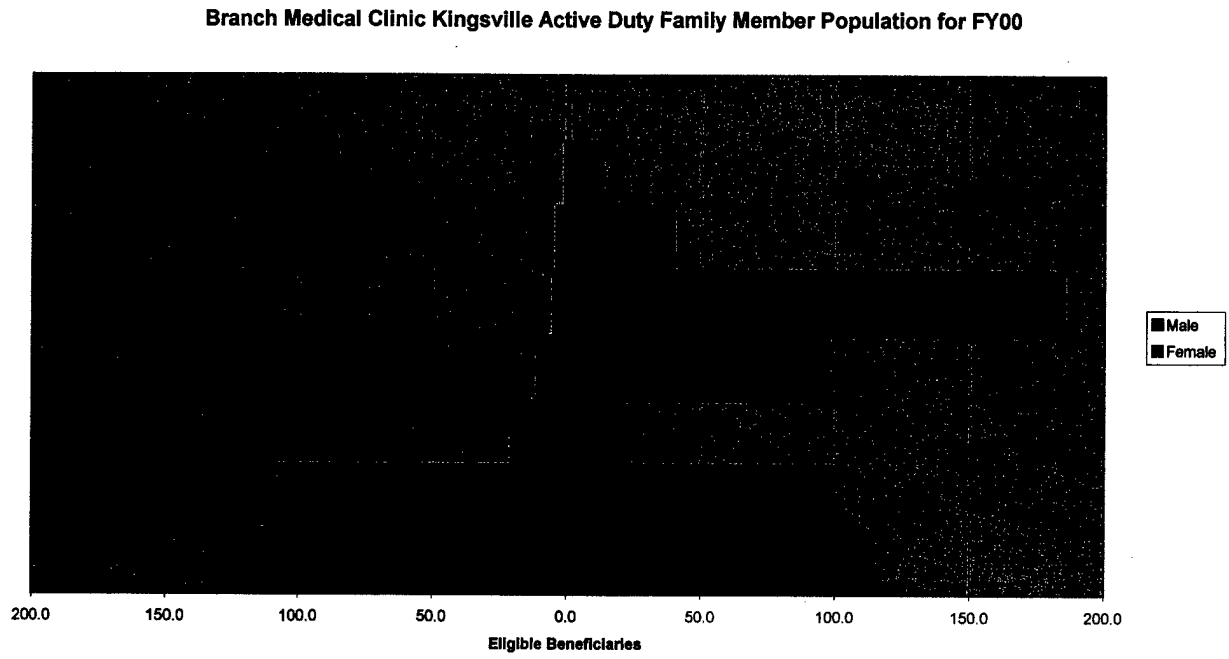
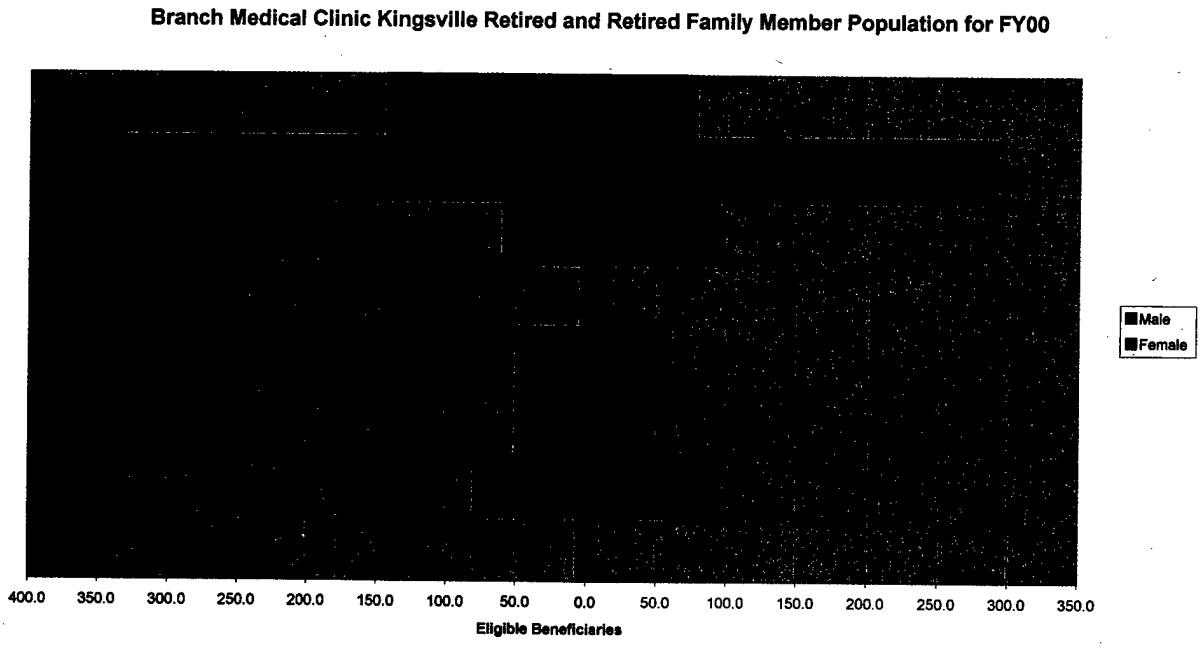


Table 5

BMC Kingsville Retiree and Retiree Family Member Population Profile

Kingsvillle Ret/Ret FM Population						
			%		% Population	
Age Group	Female	Male	Female	Male	Female	Male
0-4	8.0	6.0	0.6	0.4	0.3	0.2
5-14	74.0	80.0	5.3	5.8	2.4	2.6
15-17	36.0	50.5	2.6	3.7	1.2	1.7
18-24	59.5	50.0	4.3	3.6	2.0	1.7
25-34	17.0	4.5	1.2	0.3	0.6	0.1
35-44	93.0	60.0	6.7	4.3	3.1	2.0
45-64	291.0	333.5	21.0	24.1	9.6	11.0
65+	76.5	144.0	5.5	10.4	2.5	4.8
Total	655.0	728.5	47.3	52.7	21.6	24.1
Total Population	**1383.5**				**45.7**	

Figure 4. Population pyramid for the Retiree and Retiree Family Member population at BMC Kingsville.



ADFMs and Retirees and their family members comprise 73% of the BMC Kingsville population. Of this, 31% is the pediatric population and 40% is female.

Table 6 and Figure 5 profile the population of active duty family members for BMC Ingleside. Table 7 and Figure 6 profile the population of retirees and their family members for BMC Ingleside. Again, this data was collected using MCFAS.

Table 6

BMC Ingleside Active Duty Family Member Population Profile

Ingleside AD Family Member Population						
			%		% Population	
Age Group	Female	Male	Female	Male	Female	Male
0-4	273.5	272.0	11.0	10.9	3.6	3.6
5-14	423.0	444.0	16.9	17.8	5.6	5.9
15-17	56.5	56.5	2.3	2.3	0.7	0.7
18-24	171.5	29.5	6.9	1.2	2.3	0.4
25-34	430.5	10.5	17.2	0.4	5.7	0.1
35-44	282.0	5.0	11.3	0.2	3.7	0.1
45-64	38.5	3.5	1.5	0.1	0.5	0.0
65+	1.0	0.0	0.0	0.0	0.0	0.0
Total	1676.5	821.0	67.1	32.9	22.1	10.8
Total Population	**2497.5**				**33.0**	

Figure 5. Population pyramid for the Active Duty Family Member population at BMC Ingleside.

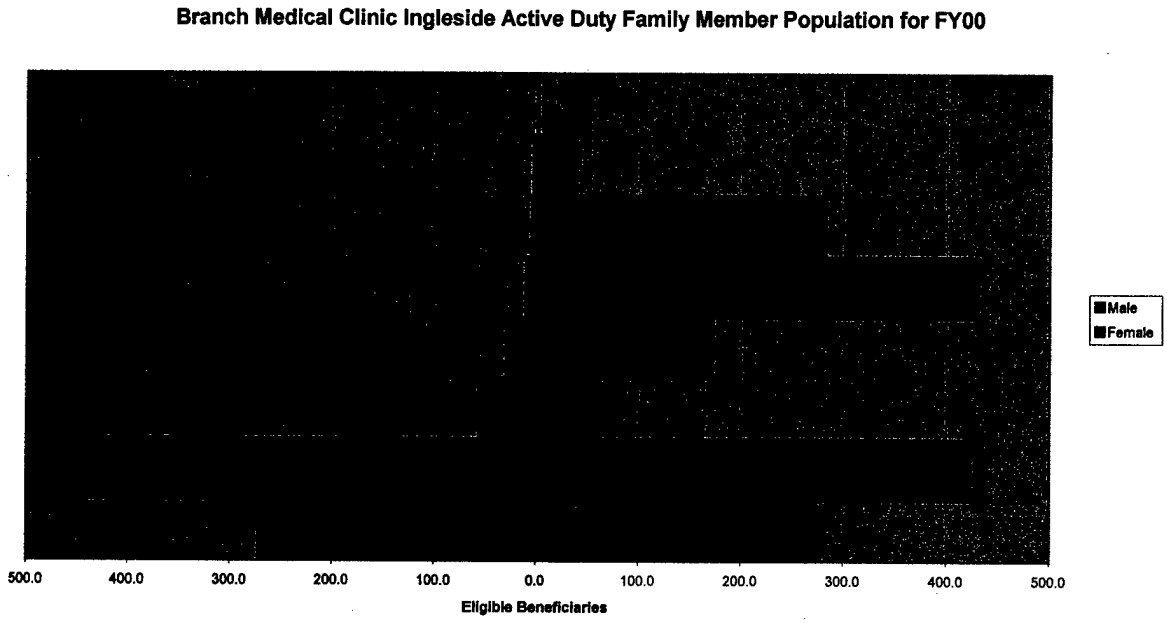
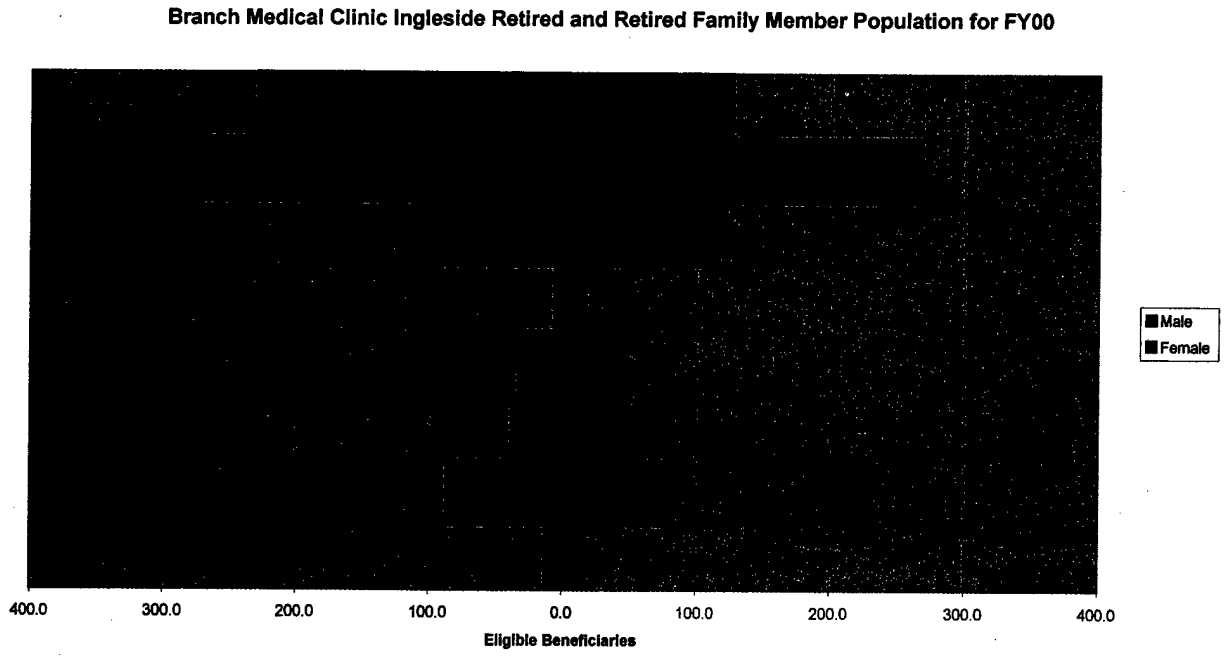


Table 7

BMC Ingleside Retiree and Retiree Family Member Population Profile

Ingleside Ret/Ret FM Population						
			%		% Population	
Age Group	Female	Male	Female	Male	Female	Male
0-4	18.0	13.0	1.2	0.9	0.2	0.2
5-14	84.0	86.5	5.5	5.7	1.1	1.1
15-17	34.0	38.0	2.2	2.5	0.4	0.5
18-24	44.5	33.0	2.9	2.2	0.6	0.4
25-34	17.0	6.0	1.1	0.4	0.2	0.1
35-44	116.0	105.0	7.6	6.9	1.5	1.4
45-64	267.5	309.5	17.5	20.2	3.5	4.1
65+	126.5	230.0	8.3	15.0	1.7	3.0
Total	707.5	821.0	46.3	53.7	9.3	10.8
Total Population	**1528.5**				**20.2**	

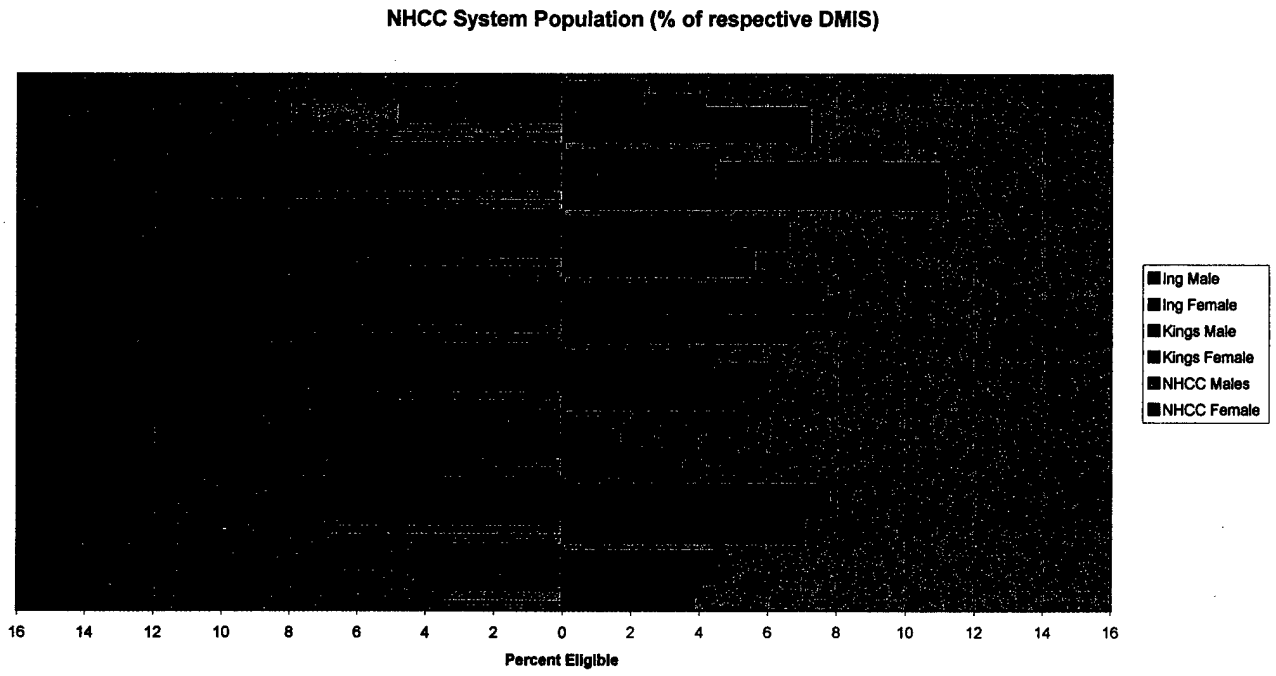
Figure 6. Population pyramid for the Retiree and Retiree Family Member population at BMC Ingleside.



ADFMs and Retirees and their family members comprise 53% of the BMC Ingleside beneficiary population. Of this, 24% is the pediatric population and 31% is female.

Figure 7 is a population pyramid used to provide an intuitive comparison of the three target markets. It was generated using fiscal year 2000 projections from MCFAS. Percentages of the respective populations were used to illustrate similarities and differences between the compositions of each segmented market. As a percentage of their own population, no noticeable differences occur until after the pediatric age groups (ages 0-17). A significant difference in the percentage of female population does not occur until age 45. The population pyramid demonstrates a much larger percentage of females in the 45-64 and 65+ groups for NHCC and BMC Kingsville. In the 18-44 age range, which is the predominate active duty age range, there is a noticeable difference between the three sites. This is largely attributed to the mission of each of the three bases.

Figure 7. A comparison of NHCC, BMC Kingsville, and BMC Ingleside beneficiary population as a percentage of their respective populations.



The demographic tables and figures previously portrayed only provide a cross sectional glimpse of the TRICARE Prime enrollment opportunities. Analysis of current TRICARE Prime enrollment to a MTF PCM and network PCM will describe current levels as compared to the possibilities. Again, active-duty personnel automatically receive TRICARE Prime benefits. Therefore, this analysis only looks at ADFMs and Retirees and the Retiree Family Member populations. Figures 8-11 are line

graphs showing the TRICARE Prime enrollment trends to a MTF PCM and a Network PCM.

Figure 8. Active Duty Family Member enrollment to TRICARE Prime who chose a MTF PCM.

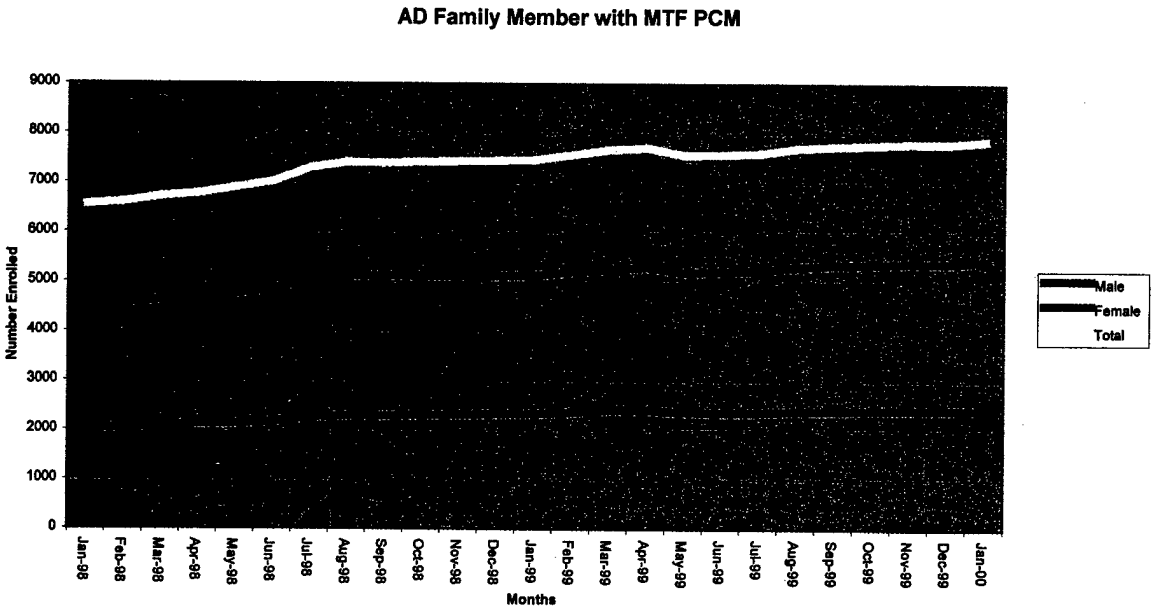


Figure 9. Retiree and Retiree Family Members enrollment to TRICARE Prime who chose a MTF PCM.

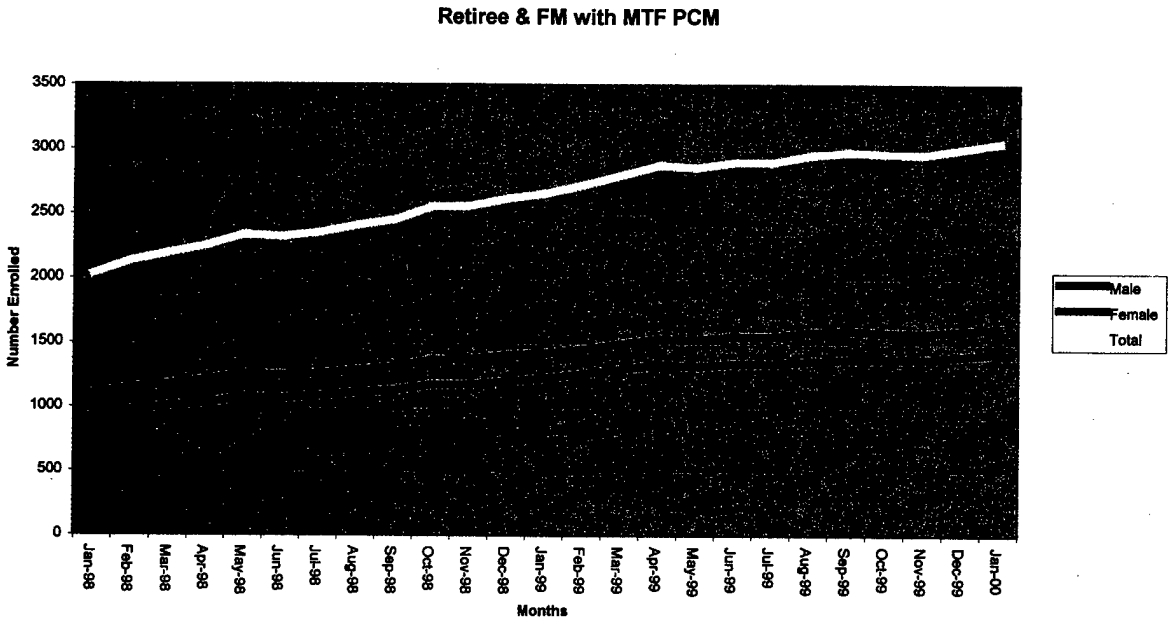


Figure 10. Active Duty Family Member enrollment to TRICARE Prime who chose a Network PCM.

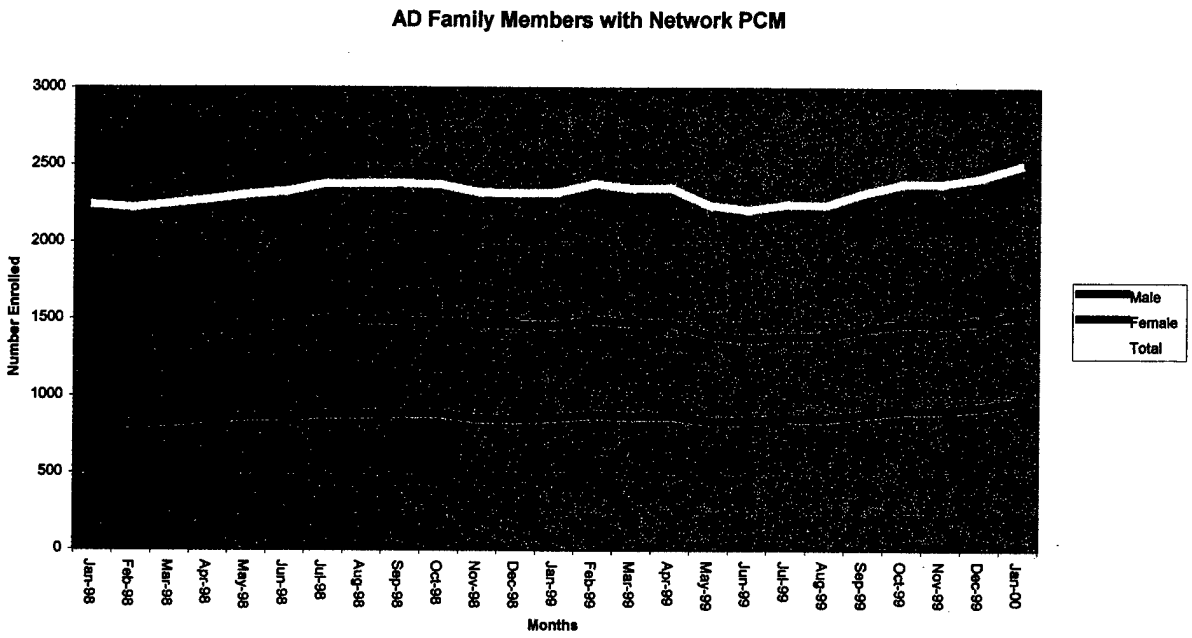
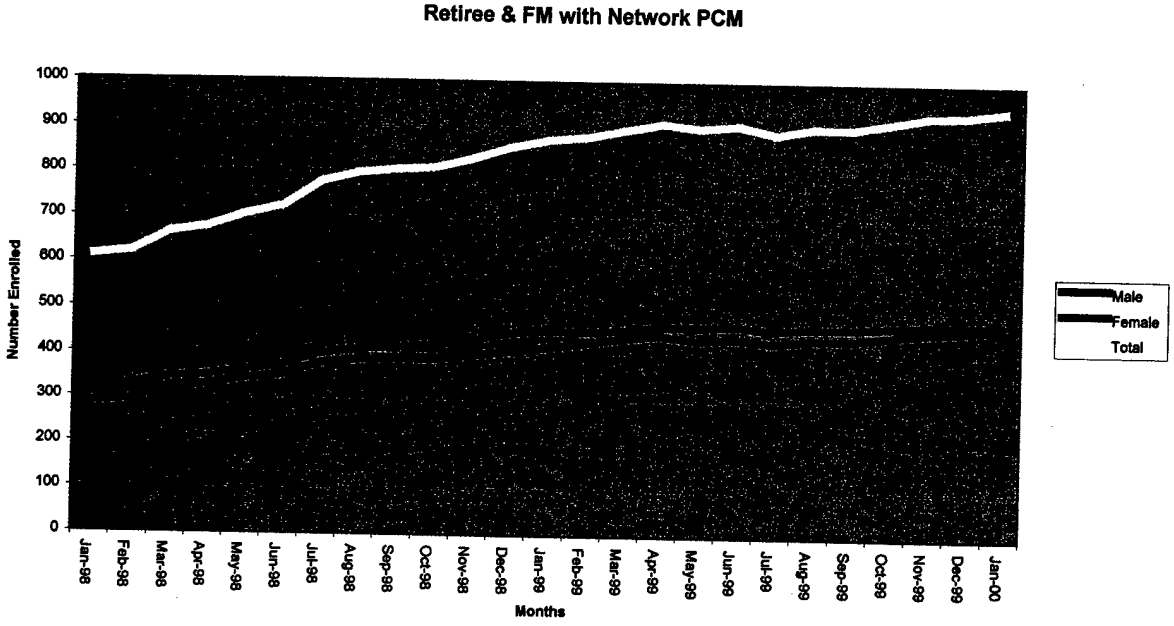


Figure 11. Retiree and Retiree Family Member enrollment to TRICARE Prime who chose a Network PCM.



The data for the enrollment graphs were obtained from a report that is routinely generated by the Managed Care Contractor (MCC), Foundation Healthcare Federal Services (FHFS), for the lead agent. FHFS's enrollment data was compared to Composite Health Care System's (CHCS) enrollment data and was found to be higher in all categories. There is no definitive reason for the discrepancies except that FHFS's computer system was designed to track enrollment data, and they have less access to their system. There has been some discussion on

synchronization efforts between the MCC's data collection systems and CHCS. However, for numerous reasons this has not come to fruition. FHFS's data was used for this analysis for consistency purposes. It is the data reported to the lead agent, used to analyze resource-sharing agreements, and used to make business decisions about services provided.

Figure 8 shows that ADFM enrollment to a MTF PCM has been relatively stagnant since the summer of 1998. On the other hand, Figure 9 indicates some growth, however slight. Figure 10 has been, for all intents and purposes, flat-lined since January 1998. Like Figure 9, Figure 10 shows a slight growth in enrollment.

In the summer of 2000, NHCCHS is planning to institute a policy of directed enrollment. This means that as beneficiaries request TRICARE Prime enrollment, they will be directed to a MTF PCM of their choice until the MTF reaches capacity. The current beneficiaries using a network PCM are grandfathered from the policy. So, what is the market population remaining to capture in TRICARE Prime?

To begin answering this question, some calculations are required on the projected 2000 population for the three MTFs. MCFAS, using the PRISM model, indicates there is a total beneficiary population of 27,667. Since the 65+ population is not eligible for TRICARE Prime enrollment, they are removed from

the total. The remaining population is 24,412. As of the end of January 2000, FHFS reported that 15,976 beneficiaries are enrolled to the MTFs, and 3,458 are enrolled to the network. Because these beneficiaries are already enrolled in TRICARE Prime, they are removed from the target population leaving 4,978 beneficiaries not enrolled in TRICARE Prime.

This is a penetration rate of 82%, one of the top rates in Region 6. Health Maintenance Organizations (HMOs) only dream of a penetration rate of this magnitude. The national penetration rate is 38.8%, and for Texas it is 27.4% (Hoechst Marion Roussel, 1999, p.20). Although NHCCHS does have somewhat of a captured audience, this is still a fantastic market penetration rate.

Even though there are only 4,978 eligible beneficiaries within the catchment area remaining for capture, NHCCHS provides services for a large population outside of the catchment area. Appendix A provides an illustration of the South Texas TRICARE Directory Area provided to the government by FHFS. It provides an overview of the service area types for the Corpus Christi and Rio Grande Valley areas. This illustration shows that TRICARE Prime coverage is only available in all or part of Kleberg, Nueces, San Patricio, Aransas, and Refugio counties. Keep in mind, these are the areas FHFS has denoted as TRICARE Prime and Extra, not necessarily what falls within a catchment area.

Appendix B is a series of maps; created using Trendstar data, the South Texas Fall/Winter 1999 Provider Directory, and Microsoft MapPoint™ 2000 to give an idea of where the non-prime utilization of MTF services are residing. Also identified on these maps are the locations of hospitals and network PCMs. Many of the PCMs have multiple offices in the areas surrounding the MTFs. For example, a network pediatrician has his main office in Corpus Christi, and a secondary office in Ingleside. He rotates around the clinics to support the needs of both the civilian and military populations. Because this series of maps encompasses such a large picture, not all of the hospital and PCM locations are individually identified. Instead, they will appear as multi-colored squares when the sites are located at a close proximity to each other. These are more identifiable on the next series of maps that take a closer look at the more concentrated areas within the catchment areas.

Appendix B shows that beneficiaries come from as far north as Refugio county and as far south as the Mexican border. These outlying areas do have a TRICARE network, but it is limited. However, the greatest concentration of non-prime beneficiaries using a MTF is within the twenty-mile catchment areas. Most noticeably is the 78418 zip code, immediately outside the NAS Corpus Christi front gate in the Flour Bluff area. The next concentrated area is in Kleberg County surrounding NAS

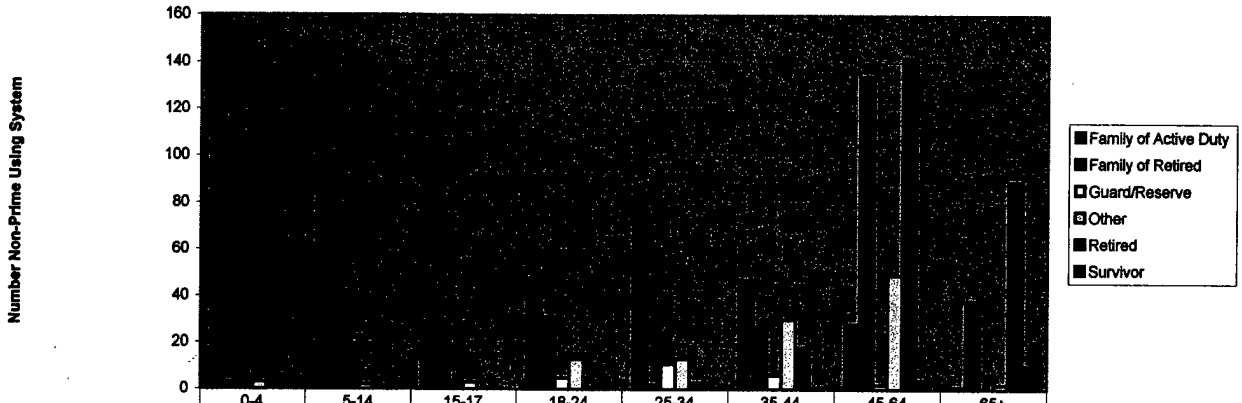
Kingsville. Following these are the zip codes throughout the Corpus Christi area.

Appendix C takes a closer look at some of the more concentrated zip codes. The first map, a look around NHCC, shows that the Corpus Christi area has an abundance of network PCMs and hospital facilities. However, in the 78418 zip code area, there are only two PCM locations, and these are for pediatrics. This makes NHCC the closest medical service available for this target population. The area around BMC Kingsville paints a somewhat different picture. There are not very many network PCMs and there is only one hospital in the area. As a matter of fact, Corpus Christi is the next closest available service.

Since these beneficiaries are already using NHCCHS services, they are considered a prime target market for recapture. But, how many of these non-prime beneficiaries are eligible for TRICARE Prime enrollment? Figure 12 reveals some interesting information. The data used for the charts in Figure 12 is a TRENDSTAR report of Non-TRICARE Prime beneficiaries using a MTF in fiscal year 1999 by zip code.

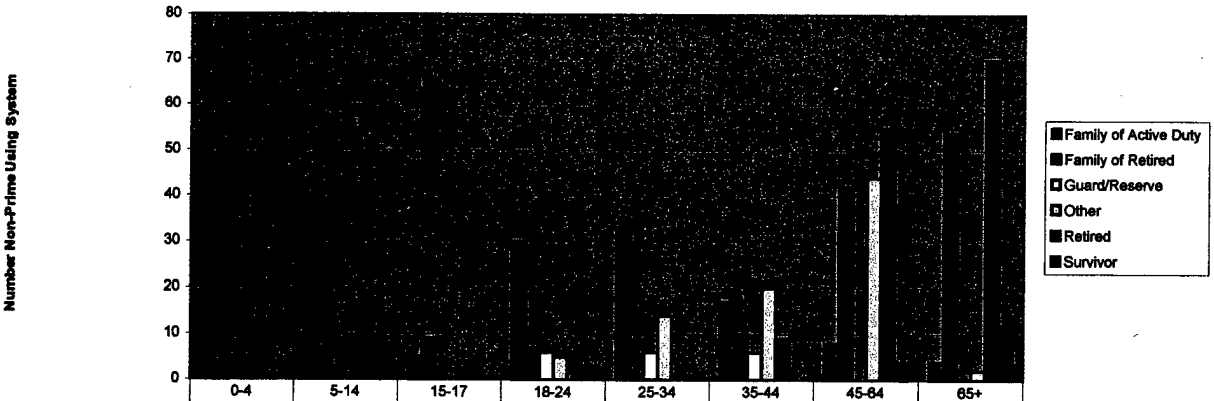
Figure 12. A Closer Look at the Non-Prime Beneficiary Usage of a MTF in FY99 for the Top Four Zip Codes.

78418 Non-Prime Beneficiaries Using a MTF in FY99



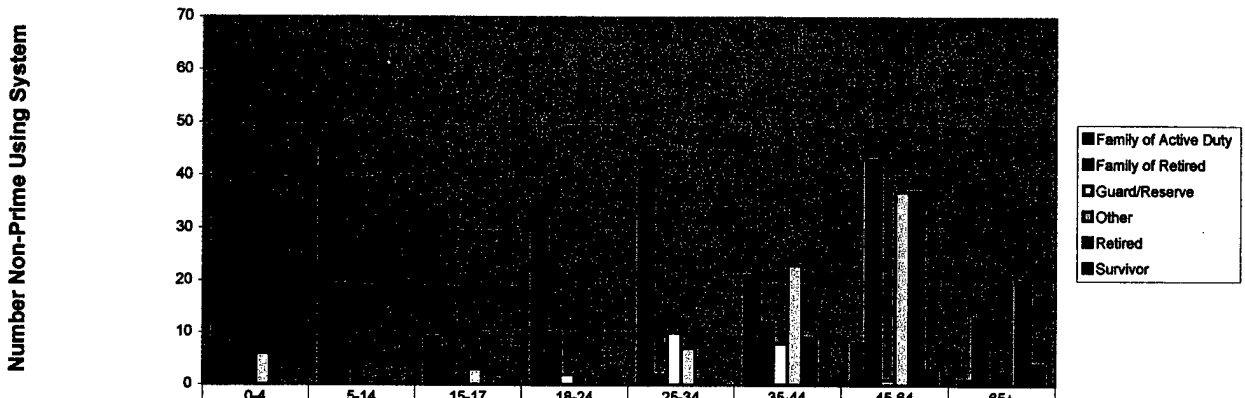
	0-4	5-14	15-17	18-24	25-34	35-44	45-64	65+
Family of Active Duty	119	125	29	44	71	47	28	1
Family of Retired	3	25	30	31	2	27	134	38
Guard/Reserve	0	0	0	5	11	6	2	0
Other	3	2	3	13	13	30	49	2
Retired	0	0	0	1	3	18	142	89
Survivor	0	4	0	1	0	1	4	10

78412 Non-Prime Beneficiary Usage of a MTF in FY99



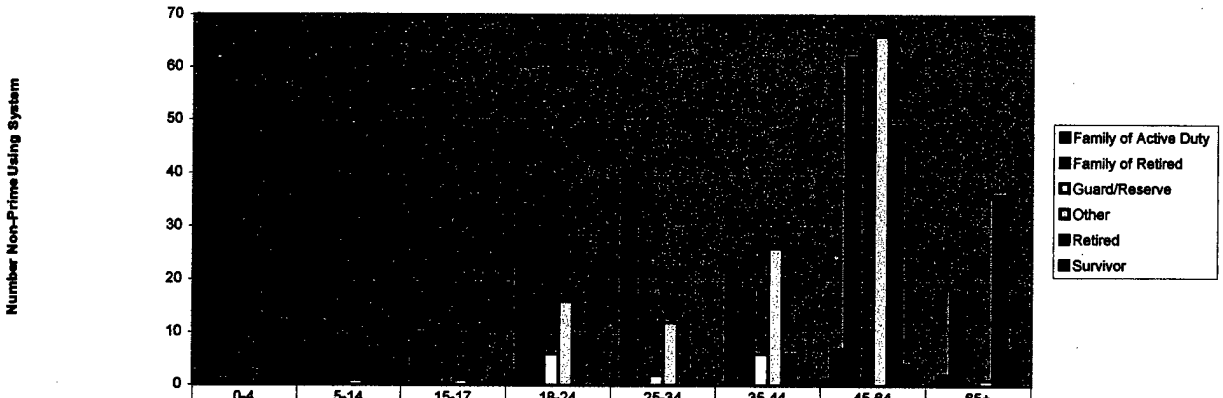
	0-4	5-14	15-17	18-24	25-34	35-44	45-64	65+
Family of Active Duty	42	35	5	30	33	17	8	4
Family of Retired	4	7	9	7	1	10	42	54
Guard/Reserve	0	0	0	6	6	6	0	0
Other	1	0	0	5	14	20	44	2
Retired	0	0	0	0	0	9	55	70
Survivor	0	0	0	1	1	0	4	12

78413 Non-Prime Beneficiary Usage of a MTF in FY99



	0-4	5-14	15-17	18-24	25-34	35-44	45-64	65+
Family of Active Duty	59	45	9	36	39	21	8	1
Family of Retired	0	10	7	10	2	12	43	13
Guard/Reserve	0	0	0	2	10	8	1	0
Other	6	0	3	0	7	23	37	0
Retired	0	0	0	0	1	9	37	20
Survivor	0	0	1	1	0	0	3	4

78363 Non-Prime Beneficiary Usage of a MTF in FY99



	0-4	5-14	15-17	18-24	25-34	35-44	45-64	65+
Family of Active Duty	48	45	10	34	41	22	7	2
Family of Retired	1	12	7	17	0	18	62	18
Guard/Reserve	0	0	0	6	2	6	0	0
Other	0	1	1	16	12	26	66	1
Retired	0	0	0	0	0	6	49	36
Survivor	0	1	0	0	0	1	4	7

Zip Code 78418, which is right outside the front gate of NAS Corpus Christi, had a fiscal year 1999 average of 4,968.5

eligible beneficiaries, according to a MCFAS report generated on 25 February 2000. The 65+ age group constitutes 539 beneficiaries and the active duty has 154.5 beneficiaries. This leaves an eligible TRICARE Prime population in this zip code of 4,275. According to the Lead Agent TRICARE Southwest, zip code 78418 has enrolled 2,560 beneficiaries. This leaves a target population for TRICARE Prime enrollment of 1,715.

Zip Code 78412 had a beneficiary population of 2,237.5 eligible beneficiaries, according to a MCFAS report generated on 25 February 2000. Of this, 668 are in the 65+ age group and 1 is active duty. This leaves an eligible population of 1,568.5. The Lead Agent reports that there are 793 beneficiaries enrolled in TRICARE Prime. Now, there are 775.5 eligible beneficiaries remaining for enrollment. Of these beneficiaries, 422, or 54%, are Non-Prime beneficiaries already utilizing a MTF.

Zip Code 78413 had a beneficiary population of 2,342 eligible beneficiaries, according to a MCFAS report generated on 25 February 2000. Of this, 289 are in the 65+ age group and 1 is active duty. This leaves an eligible population of 2,052. The Lead Agent reports that there are 1,097 beneficiaries enrolled in TRICARE Prime. Now, there are 955 eligible beneficiaries remaining for enrollment. Of these beneficiaries, 450, or 47%, are Non-Prime beneficiaries already utilizing a MTF.

Zip Code 78363 had a beneficiary population of 2,637 eligible beneficiaries, according to a MCFAS report generated on 25 February 2000. Of this, 212 are in the 65+ age group and 219.5 are active duty. This leaves an eligible population of 2,205.5. The Lead Agent reports that there are 1,206 beneficiaries enrolled in TRICARE Prime. Now, there are 999.5 eligible beneficiaries remaining for enrollment. Of these beneficiaries, 521, or 52%, are Non-Prime beneficiaries already utilizing a MTF.

Continuing to concentrate on the graphs in Figure 12, one should notice that the majority of the beneficiaries are Family of Active Duty, Family of Retired, and Retired. Pediatrics (0-17 years old) is the predominate group in the Family of Active Duty category at all four locations. Also, the Family of Retired and the Retired groups make up a large percentage of the 45-64 age category. No conclusions will be drawn here, but keep this in mind during the discussion of results.

When the directed enrollment policy is initiated and if marketing efforts can capture non-enrolled TRICARE eligible beneficiaries, is there adequate provider staff at each location to support the additional workload? Table 8 illustrates how providers are currently resourced between the three sites.

Table 8.

Available PCMs in NHCCHS as of January 2000

Provider Type	NHCC	BMC Kingsville	BMC Ingleside
Family Practice	1	0	1
General Medical Officer	2	2	3
Pediatrician	2	0	0

NHCC has a Primary Care Contract that is contracted to have a panel of 7,500 beneficiaries. Their current enrollment is 4,518. This was pulled from the CHCS on 11 January 2000. Therefore, they have an available capacity of 2,982.

The literature is inundated what with what an ideal panel size for a provider should be for an efficiently run practice. However, for the sake of this portion of the study and with keeping with Military Health System optimization efforts, a panel size of 1,500 is used for a PCM. Therefore, NHCC has a capacity of 7,500 plus the 7,500 from the Primary Care Contract for a total panel size of 15,000. Notice that Internal Medicine Physicians, Flight Surgeons, Physician Assistants, or Independent Duty Corpsman are not considered for empanelment. Using the same arguments for Kingsville and Ingleside, they have a simple capacity of 3,000 and 4,500, respectively. A panel size of 4,500 is used for BMC Ingleside since one of the Medical Officers is the Officer in Charge and is limited to the number of patients that he can see.

As of February 2000, CHCS had enrollment figures of 8,944 for NHCC, 2,186 for BMC Kingsville, and 3,453 for BMC Ingleside. This leaves a remaining capacity of 6,056 for NHCC, 814 for BMC Kingsville, and 1,047 for BMC Ingleside. Although an empanelment of 1,500 per PCM is arguable, with the physician extenders this size should be manageable. Additionally, the General Medical Officers are being replaced with Family Practice physicians giving NHCCHS additional flexibility. However, are there enough of the right type of providers?

There are two Pediatricians at NHCC with a capacity of 3,000 beneficiaries, using the 1,500 per PCM model. As of January 2000, there were 2,686 pediatric beneficiaries enrolled. This leaves a capacity of 314. When the directed enrollment policy is initiated, the 3,458 beneficiaries' replacements will be directed to a MTF if they choose TRICARE Prime as their healthcare choice. Of the 3,458 beneficiaries, 59% are ages 0-17. This places an additional 2,050 pediatric-aged beneficiaries in the system. There are no pediatricians at either Kingsville or Ingleside. However, the providers at the other facilities do see pediatric aged beneficiaries on occasion.

According to MCFAS, NHCC has a pediatric population of 4,639. The next largest area is Naval Base Ingleside with 2,102 pediatric age beneficiaries, and NAS Kingsville has 754. For obvious reasons, civilian Pediatricians from the Corpus Christi

area have set up practices in close proximity to both Naval Base Ingleside and NAS Kingsville.

After removing the pediatric and over 65 populations, NHCC has a maximum population for TRICARE Prime enrollment of 9,858. Between the Primary Care Contract, the one Family Practice provider, and the two General Medical Officers, they have the capacity to empanel 12,000. This gives an excess capacity of 2,142. The number, 9,858, is high since it includes active duty personnel assigned to an operational or training unit. Although these beneficiaries are seen at NHCC, they have their own medical assets who take care of their healthcare needs on a limited basis. Using the same logic for BMC Kingsville and BMC Ingleside, their maximum population for TRICARE Prime enrollment is 2,004 and 5,058. This leaves an excess capacity for BMC Kingsville of 996 and a deficit of 558 for BMC Ingleside. The number for BMC Ingleside may look bad, but there are approximately 1,800 active duty personnel assigned to the ships, which have their own medical assets. This puts BMC Ingleside at an excess of 1,242.

These numbers can be deceiving if their limitations are not considered. First, the excess capacities are only valid if network pediatricians are caring for the excess pediatric population. Secondly, the non-enrolled active duty beneficiaries (i.e., operational units and training units) use MTF resources

thereby placing a strain on the system. Finally, a more complex capacity derivation for the PCMs may reveal much lower empanelment numbers.

Simple Volume Trade-Off Factors were calculated to determine what impact additional beneficiaries would have for the MTF or clinic when they move from TRICARE Prime Network to TRICARE Prime MTF. Following the model outlined by Miller in his report Volume Trade-Off Factors for the Military Health System, a simple VTF is calculated to represent a move to MTF Prime. The model is:

$$\text{VTF} = \frac{\text{Average number of visits for people using Source A}}{\text{Average number of visits for people using Source B}}$$

This demonstrates how a beneficiary's outpatient visits would change if he moved from source B to source A. In other words, if the estimate of the Prime VTF is 1.3, then a beneficiary who is currently using a network PCM would generate 30% more outpatient visits by moving to a military PCM (Miller, 1999). This is only logical if the concept of moral hazard is considered. Getzen describes the concept of moral hazard as being a change in attitude a patient has when insured vs. not insured (Getzen, 1997). In other words, as patients move from network providers where there is a co-pay to the MTF where care is free, they are likely to seek care more often at the MTF.

The utilization rate was calculated using the number of visits to a PCM collected by Trendstar, and the total enrollment that was collected by CHCS. For the purposes of this study, the utilization rate is calculated on the CHAMPUS eligible population. The CHAMPUS eligible population includes Family of Active Duty, Retired, and Family of Retired up to age 64. Also, because TRICARE Prime enrollment is only provided as a system, the utilization rate will be calculated as a combination of all three sites. So, NHCCHS utilization rate of visits to a PCM for fiscal year 1999 is 3.23. The TRICARE Prime Network utilization rate of visits to a PCM for fiscal year 1999 is 4.00. Therefore, the VTF is 3.23/4.00=0.81. This implies that as the beneficiaries move from the network to the MTF, their visit rate will drop by 19%.

The 19% reduction does not intuitively make sense when a TRICARE Prime Network beneficiary must pay a co pay for care and care is free at the MTF. One would think just the opposite would happen. There could be several reasons for this phenomenon. Maybe the co-pay is not high enough to make a difference. It is possible that the TRENDSTAR report did not capture all of the visits to the MTF. Since no two systems in DoD will provide the same information, TRENDSTAR data was used since it could give the necessary detail needed. The other possibility is that the MTF PCMs have lower utilization rates than the network PCMs.

From a business stand point this makes sense. The more visits a beneficiary has to a network PCM, the more profit the provider can generate.

Continuing with the assumption that there will be a 19% decrease in visits when TRICARE Prime network moves to the MTF, the TRICARE Prime network population would have a new utilization rate of 3.24. Using the January 2000 TRICARE Prime network population figure received from FHFS, this equates to approximately 11,204 additional visits to the system. Since these utilization rates were calculated as visits to a PCM, and not to a specialist, then the PCMs in Table 8, along with the Primary Care contract and the Physician Assistants, are used to calculate the available capacity. The Physicians Assistants are used because the utilization rates calculated above are based on the PAs seeing patients at the PCM site. They are PCM physician extenders. Table 9 is a breakdown of visits available for each provider type at all three sites. The idea behind this model is based on a model designed by MED-312: "Primary Care Group Practice Model" (Butler, 1996).

Although this model is somewhat dated and is based on a Primary Care Team concept, there is legitimacy for using it in this study. First, NHCCHS is planning to implement a Primary Care Team in the summer of 2000. Secondly, the capacity model is based on each provider using two exam rooms, and seeing 107-111

patients per week. Thirdly, it adjusts for department head duties, mentoring, on-call duties, and chart reviews. Finally, it accounts for the utilization rate of the population served.

Table 9

Capacity Model for Providers at NHCC, BMC Kingsville, and BMC Ingleside.

Naval Hospital Corpus Christi										
Provider	No. Rooms	Unadjusted Capacity	Mentoring Adjustment	Chart Review Adjustment	Call Adjustment	Readiness Adjustment	Adjusted Capacity	Enrollment (UR=3.2)	Available Capacity	% Enrolled
Peds (DH)	2	4815	-405	-900	-600		2910	909		
Peds-Con	2	4815		-900		214	4129	1290		
FP (DH)	2	4815	-405	-900	-600		2910	909		
GMO	2	4995		-900	-600		3495	1092		
GMO	2	4995		-900	-600		3495	1092		
PA	2	4995		-900	-600		3495	1092		
TOTAL							20434	6386	1759	72
BMC Kingsville										
Provider	No. Rooms	Unadjusted Capacity	Mentoring Adjustment	Chart Review Adjustment	Call Adjustment	Readiness Adjustment	Adjusted Capacity	Enrollment (UR=3.2)	Available Capacity	% Enrolled
GMO	2	4995		-900	-600		3495	1092		
GMO	2	4995		-900	-600		3495	1092		
TOTAL							6990	2184	140	94
BMC Ingleside										
Provider	No. Rooms	Unadjusted Capacity	Mentoring Adjustment	Chart Review Adjustment	Call Adjustment	Readiness Adjustment	Adjusted Capacity	Enrollment (UR=3.2)	Available Capacity	% Enrolled
FP	2	4815	-405	-900	-600		2910	909		
GMO	2	4995		-900	-600		3495	1092		
GMO	2	4995		-900	-600		3495	1092		
PA	2	4995		-900	-600		3495	1092		
TOTAL							13395	4186	841	80

Considering that the Primary Care Contract has an available capacity of 2,975 and the NHCCHS has 2,740, then the system has

an available capacity of 5,715. If all TRICARE Prime network beneficiaries moved to the MTF, there is still a remaining capacity of 2,257.

Determination of the key health needs. The determination of the key health needs was made utilizing a TRENDSTAR report that identified visits by ICD-9-CM codes during fiscal year 1999. These are only the visits to NHCCHS and do not include any network data. The top twenty ICD-9-CM codes are listed in Table 10 by MEPRS Description (where the care was performed), beneficiary category, and age group. Studying the data reveals that the majority of visits to the system are for routine health care or physical appointments. Additionally, the 0-4 age group makes the top twenty with otitis media NOS, other specified counseling, and acute URI. Also, the 45-64 age group ranked 9th and 10th with hypertension NOS. Overall, if this is any evidence to the health of the population, they are doing very well.

Table 10.

The top 20 ICD-9-CM Diagnosis Codes for NHCCHS.

PHYSICAL THERAPY CLINIC	ACTIVE DUTY	Ages 25-34	V571	PHYSICAL THERAPY	648
OCCUPATIONAL HLT CL/INGL	ACTIVE DUTY	Ages 25-34	V700	ROUTINE MEDICAL EXAM	565
PEDIATRICS CLINIC/PARTNE	FAMILY OF ACTIVE	Ages 0-4	3829	OTITIS MEDIA NOS	525
PEDIATRICS CLINIC/PARTNE	FAMILY OF ACTIVE	Ages 0-4	V202	ROUTIN CHILD HEALTH EXAM	524
PRIMARY CARE CL/KGSVL	ACTIVE DUTY	Ages 25-34	V6549	OTHER SPECFIED COUNSELING	521
FLIGHT MEDICINE CLINIC	ACTIVE DUTY	Ages 18-24	V705	HEALTH EXAM-GROUP SURVEILANCE	520
PRIMARY CARE CONTRACT	RETIRED	Ages 45-64	4019	HYPERTENSION NOS	508
PRIMARY CARE CONTRACT	FAMILY OF RETIRED	Ages 45-64	4019	HYPERTENSION NOS	492
OPTOMETRY CLINIC	ACTIVE DUTY	Ages 35-44	V720	EYE & VISION EXAMINATION	439
PEDIATRICS CLINIC/MILITA	FAMILY OF ACTIVE	Ages 0-4	V6549	OTHER SPECFIED COUNSELING	438
PRIMARY CARE CLINIC	ACTIVE DUTY	Ages 25-34	V705	HEALTH EXAM-GROUP SURVEILANCE	437
OPTOMETRY CLINIC	ACTIVE DUTY	Ages 18-24	V720	EYE & VISION EXAMINATION	429
FLIGHT MEDICINE CLINIC	ACTIVE DUTY	Ages 25-34	4659	ACUTE URI NOS	415
PEDIATRICS CLINIC/PARTNE	FAMILY OF ACTIVE	Ages 0-4	4659	ACUTE URI NOS	402
PEDIATRICS CLINIC/MILITA	FAMILY OF ACTIVE	Ages 0-4	V202	ROUTIN CHILD HEALTH EXAM	390
PEDIATRICS CLINIC/MILITA	FAMILY OF ACTIVE	Ages 0-4	3829	OTITIS MEDIA NOS	385
OCCUPATIONAL HLT CL/INGL	ACTIVE DUTY	Ages 35-44	V700	ROUTINE MEDICAL EXAM	376
OCCUPATIONAL HLT CL/INGL	ACTIVE DUTY	Ages 18-24	V700	ROUTINE MEDICAL EXAM	368

Estimates of health status. Every year, the DoD distributes the "Health Care Survey of DoD Beneficiaries." To estimate the health status of this NHCCHS population, the "1998 Health Care Survey of DoD Beneficiaries: Summary Report on Catchment Areas for Region 6" is utilized. The document stated that NHCCHS beneficiaries reported a physical health level of 40%, the percentage of the population that is worse than average. "If the reported proportion of beneficiaries in the exhibit is less than 50%, the reader can infer that the study population is, on average, healthier than the general U.S. population" (Mathematica Policy Research, 1999, p. 21).

DISCUSSION

It becomes quite obvious after analyzing the data that there are three distinct geographic markets: Naval Air Station Corpus Christi, Naval Air Station Kingsville, and Naval Base Ingleside. However, segmentation cannot stop at this point. Each beneficiary category has their own needs, and within each category different age groups have their specific needs. Overall, Table 1 shows that the NHCCHS is equitably split between male and female, 54% and 46% respectively. What is more revealing is that the pediatric age group makes up 25% of the population. On the surface this may not sound important, but when there are only two pediatricians in the system, this becomes a key issue.

The two Pediatricians are located at NHCC and are assisted by a Physician Assistant. This provides services for the 17% in the immediate area, which are not enrolled to a TRICARE Prime MTF. As a matter-of-fact, 2,050 of the 7,210 pediatric beneficiaries, or 28%, are TRICARE Prime network. NHCC Pediatricians have 2,687 pediatric beneficiaries enrolled, or 37%. This leaves 2,473 pediatric beneficiaries in either TRICARE Extra or Standard. Figures 8-11 show that the TRICARE Prime enrollment has not changed much for the network or MTF PCMs over the past eighteen months.

This is a good segment of the population to direct marketing efforts toward joining TRICARE MTF Prime. However, it is not going to be successful unless changes are made in hospital policies. In the four zip codes analyzed, see Figure 12, a significant number of the Non-Prime usage of the MTF was by those within the pediatric age group. These individuals have the best of both worlds. They choose not to join TRICARE Prime and be locked into a MTF PCM. However, they use the MTF PCM whenever necessary if it is available. All other times, they use a network provider for their care.

Unless NHCCHS changes its policy so only TRICARE Prime are seen, then the Non-Prime usage of the system will continue. But what is the incentive for doing this? There really is not one. As mentioned above, the beneficiary has no incentive to change since they have tremendous flexibility on where to seek care, and the MTF has no incentive to change since funding is not based on enrollment at this time.

BMC Kingsville's pediatric situation is quite different. Its population is comprised of 31%, or 730, pediatric aged beneficiaries. The clinic does not have a Pediatrician or Family Practice provider, but the two General Medical Officers and the Physician's Assistant do not have any age restrictions. To be specific, they had 1,375 pediatric visits from the pediatric population enrolled to BMC Kingsville, and 273 visits from the

Non-Prime enrollees. Also, there are two Pediatric locations in the network, as observed on the second map in Appendix C, for this area that can adequately handle the workload. This population is not significant enough to consider putting a pediatrician at the clinic. Especially if the clinic receives a Family Practice provider to assist the GMOs and PA, and the NHCC Pediatrician continues to make routine visits to the clinic.

BMC Ingleside, on the other hand, has a much different situation. This population is comprised of 24%, or 1,799, pediatric aged beneficiaries. The clinic had 3,512 visits in fiscal year 1999 from its pediatric enrolled beneficiaries, and 343 visits from Non-Prime pediatric beneficiaries. The first map in Appendix B reveals one Pediatric location in the immediate area, and a second a little further out. The visits do not take into account the pediatric population enrolled to the Pediatrician outside the gate, which was specifically placed at this location due to the pediatric demand from the base. This Pediatrician's main office is in Corpus Christi. This is most likely a recapturable population if a Pediatrician is placed at BMC Ingleside.

As the schematics for the Primary Care Teams are being developed and additional manpower is being sought, there are not any plans to recruit more Pediatricians. NHCCHS hopes that the additional Family Practice providers, in the scope of a Primary

Care Team taking care of the entire family, will entice beneficiaries to enroll their children in TRICARE Prime. This may be wishful thinking. It depends on policy decisions by NHCCHS. Once directed enrollment is initiated, will they allow pediatrics to enroll in the network when there is not a Pediatric PCM at the MTF (i.e., BMCs Kingsville and Ingleside)? Will the active duty family members be able to afford the cost of TRICARE Extra for their children? If the answer is yes to these questions, the family will likely choose a TRICARE Extra option for pediatric services.

NHCC, BMC Kingsville, and BMC Ingleside have very large non-active duty populations (76%, 73%, and 53% respectively). Looking at Figures 1-6, it becomes evident that after the 15-17 year old group, the majority of the population is female. The retiree population is equally split. This brings up the question on whether NHCCHS has the capabilities of providing care for these populations?

First, consider the total, non-pediatric, female population. NHCC had a resource sharing agreement with an Obstetrics/Gynecology (OB/GYN) group which was recently lost. There is an ongoing search for another resource sharing agreement, but there are no OB/GYN specialty services available in the NHCCHS at this time. Although, some of the providers do perform routine PAP smears, there is a significant population

without a specialty service within the MTF that is vital to their healthcare. This naturally pushes many into TRICARE Extra for these services. Granted, if a beneficiary was TRICARE Prime with a MTF PCM and needed OB/GYN specialty services, they would be sent to that provider. This can be less appealing than just finding an OB/GYN physician to provide for all of their needs.

Secondly, there is a significant retiree population requiring specific medical attention. NHCC does have two Internal Medicine physicians on board to address some of these needs. Additionally, the General Medical Officers, Family Practice physicians, and the Physician's Assistants can provide much of their care. This portion of the population is significantly served at the current staffing configuration.

Switching gears, the female population is a prime target market. Tom Peters, in The Circle of Innovation, says that women make the majority of major spending and healthcare decisions (Peters, 1999). This target market is largely female. Therefore, a significant amount of the marketing effort should be directed at the non-active duty adult, female population.

Some provider gaps have been identified, but is there really a population to market for TRICARE Prime enrollment? According to the earlier calculations, there is an eligible beneficiary population of 4,978 remaining to join TRICARE Prime. Zip code 78418 has a non-prime population of 1,715. This is 34%

of the Non-Prime beneficiary population. A significant number of this population already uses a MTF, 60%. The remaining 40% probably have other health insurance through non-military employment and are not willing to swap for TRICARE Prime. Much like the situation stated above for the pediatrics, there are no incentives for this population to join TRICARE Prime. They have the best of both worlds. However, the 60% already using the system are a prime target market. The other zip codes studied are very similar in nature.

If marketing to increase TRICARE Prime enrollment to the MTF will be conducted, then efforts should be concentrated in the 78418, 78363, 78412, and 78413 zip codes. This will be the initial target market. The next level of target markets should be the beneficiaries within these zip codes already using the MTF. This will most likely give the biggest bang for the buck.

Two different methods for looking at capacity were analyzed, the more traditional model of 1,500 enrollees per PCM and the BUMED Primary Care Team Model. Either model demonstrates a capacity, but not one large enough to compensate for the entire Non-Prime population. Furthermore, it would be unrealistic to expect 100% enrollment.

The BUMED Primary Care Team model seems to be more legitimate since it accounts for administration time, continuing education, mentoring, and military duties. It also adjusts for

the utilization rate within the population served. The excess capacity in this model can account for 45% of the Non-Prime population. This is good since it is unrealistic to expect 100% enrollment. Of the Non-Prime population, there are many with other health insurance and there are those who just do not want a change. Furthermore, from a business viewpoint, there are those beneficiaries who you just do not want in the system. Their cost will be too high.

CONCLUSION

This study has evaluated the geographic units for Naval Air Station Corpus Christi, Naval Air Station Kingsville, and Naval Base Ingleside in relation to TRICARE Prime enrollment with a medical treatment facility Primary Care Manager. In so doing, it has laid the groundwork for the Naval Hospital Corpus Christi Healthcare System to make strategic decisions on marketing efforts. Is there a population for NHCCHS to market for TRICARE Prime enrollment?

The study reveals an 82% TRICARE Prime penetration rate within the catchment areas. This leaves a relatively small number of beneficiaries to attract into TRICARE Prime. Is this enough of a target group to expend significant resources to attract into the system? The Non-Prime beneficiary usage of the system, as demonstrated in Appendices A and B, reveal that a

portion of this population is getting care at a MTF anyway. This is a target market worth expending some effort to recruit. They are the most likely to join since they are already using the system.

However, the majority of marketing efforts should be dedicated to promoting current and upcoming programs. Wellness is the theme of the new vision. Therefore, use marketing to promote this throughout the TRICARE Prime population. The data in Table 10 indicates that this is a relatively healthy population and NHCCHS should strive to keep them this way. Additionally, efforts should be dedicated to educating beneficiaries on the capabilities of Family Practice physicians' ability to care for the pediatric population. This will be significant as the Directed Enrollment policy is implemented.

As with any study, this assessment should be viewed with caution. Because of discrepancies in information technology systems, decisions had to be made on which data sets to utilize for the assessment. There is no guarantee that the correct data set was chosen, but it was the one that was most justifiable. Time permitting, a future assessment should analyze the data and data sources to determine the correct population figures to use.

Only secondary data was used in this study. The NHCCHS would get a better feel of beneficiaries' desires for healthcare services and locations by performing a survey of the population.

Specifically, they could survey the Non-Prime beneficiaries to determine why they have not joined TRICARE Prime but still use the MTF. The survey would hint towards the population's purchase characteristics.

Finally, another needs assessment should be performed late in calendar year 2001. This will give the implementation of the Primary Care Teams time to equilibrate and allow time for the population to learn of its capabilities. The new assessment will identify how successful the teams are and identify any new healthcare gaps.

The conclusion of this study is that there is not a real need to spend a great deal of resources on marketing efforts to increase TRICARE Prime enrollment. However, marketing of programs and capabilities is critical, such as marketing the newly developed wellness initiatives. George Bernard Shaw said, "Of all the anti-social vested interests the worst is the vested interest in ill-health" (Columbia University, 1998). The NHCCHS must continue to market to keep their beneficiary population healthy.

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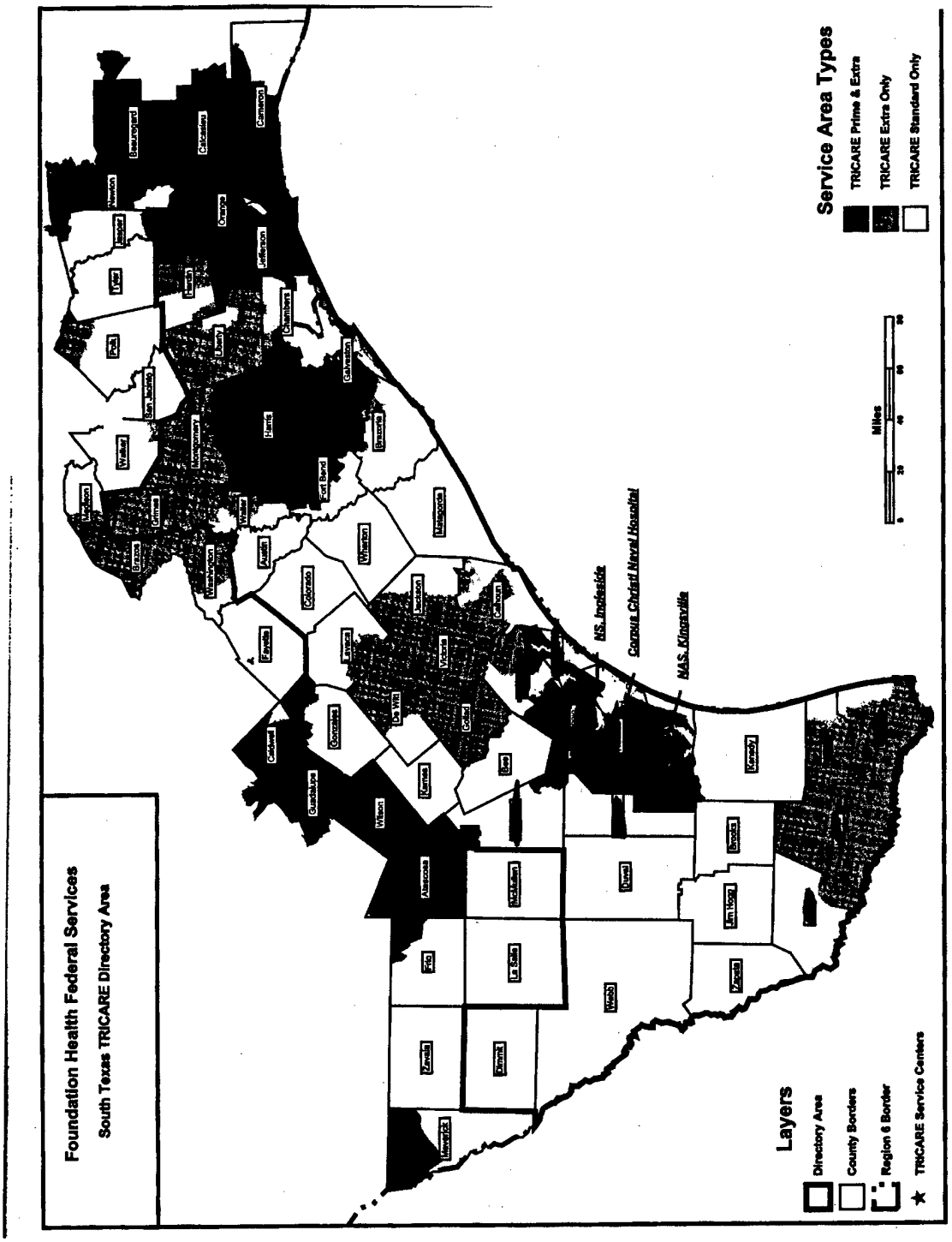
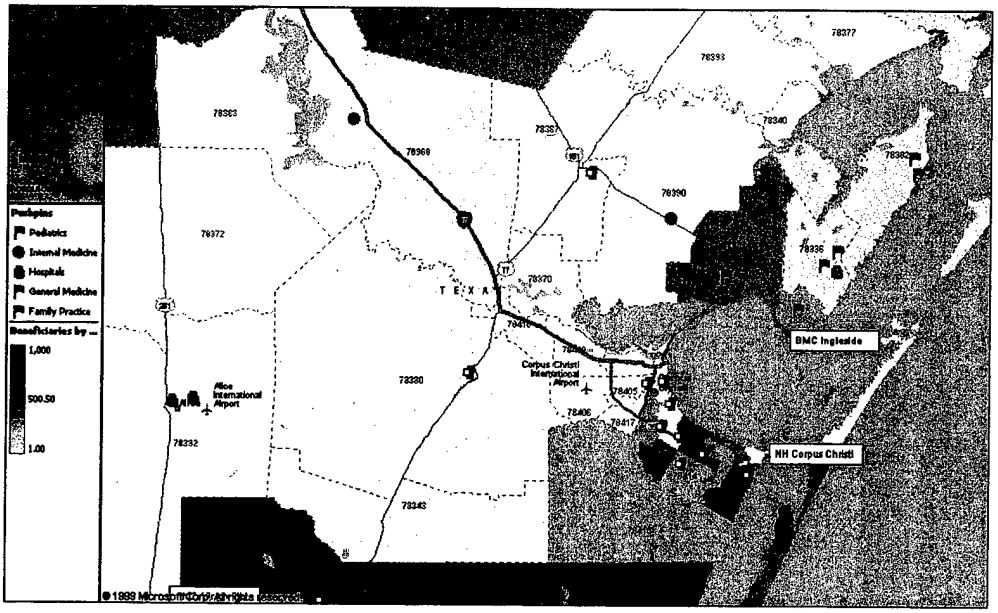
Appendix A

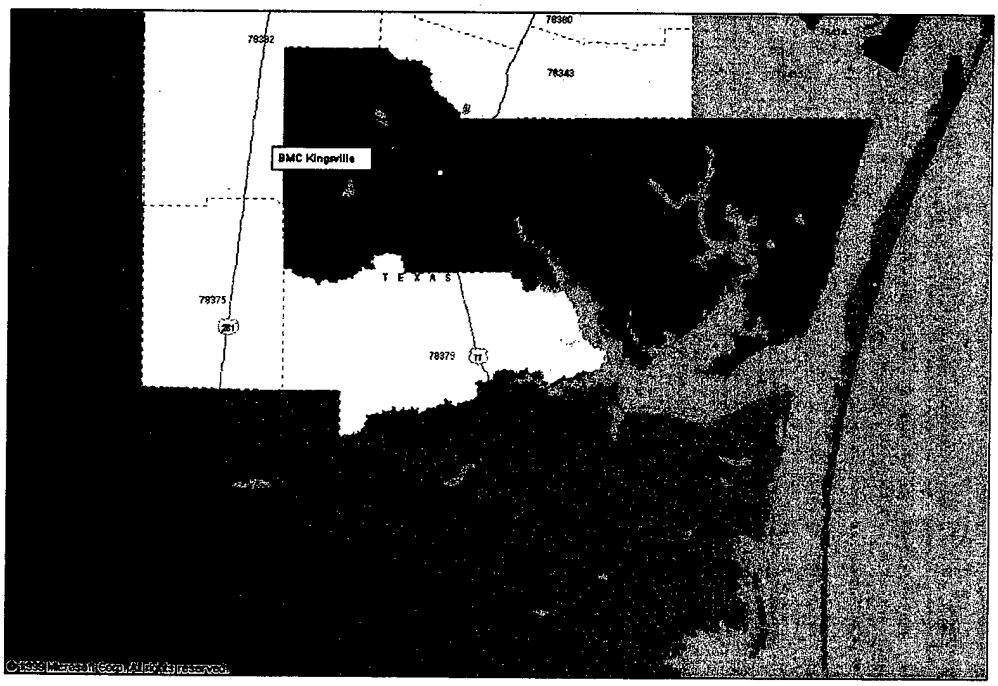
Service Area Types Covered by Foundation Health Federal Services in South Texas

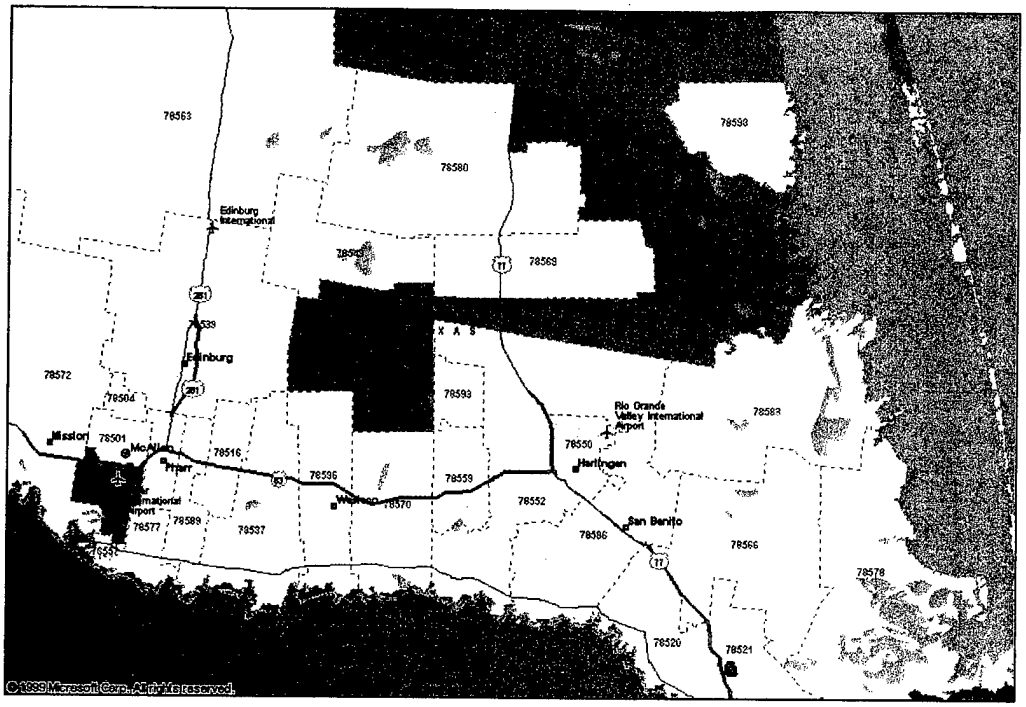


Appendix B

Non-Prime Beneficiary MTF Utilization by Zip Code



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78580
78538
Edinburg International
78569
281
Edinburg
78572
78504
78593
Rio Grande Valley International Airport
78583
Mission
78501
McAllen
Pharr
78516
78550
Harlingen
78536
78559
78570
78552
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78589
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San Benito
78586
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Appendix C

A More Detailed Glance at the Non-Prime Beneficiary Utilization of the MTFs